

**PENERAPAN *SCIENTIFIC APPROACH* DALAM UPAYA MELATIHKAN
LITERASI SAINTIFIK DALAM DOMAIN KOMPETENSI DAN DOMAIN
PENGETAHUAN SISWA SMP PADA TOPIK KALOR**

Mahasiswa : Widi Ilhami Novili, 1200068

Pembimbing 1 : Dr. Setiya Utari, M.Si

Pembimbing II: Duden Saepuzaman, M.Pd

Departemen Pendidikan Fisika FPMIPA UPI Tahun 2016

Abstrak

Literasi Saintifik (LS) merupakan suatu kemampuan seseorang dalam menggunakan pengetahuan dan proses sains untuk memahami fenomena ilmiah dalam memecahkan suatu masalah atau mengambil keputusan. Namun diketahui bahwa LS siswa Indonesia masih rendah. Terdapat indikasi bahwa LS ini kurang terfasilitasi di dalam pembelajaran sains. Kemampuan yang dipandang sulit terkait dengan mengevaluasi dan merancang penyelidikan ilmiah, serta membuat pertanyaan penyelidikan. Penelitian *quasy-eksperimen* dengan desain *one group pretest and posttest* diterapkan di salah satu sekolah di kota Bandung melalui *random sampling* yaitu pengundian berjumlah 32 siswa yang bertujuan untuk mendapatkan hasil kemampuan LS setelah diterapkan *scientific approach* pada topik kalor. Instrumen menggunakan 20 soal essay dengan reliabilitas 0,83. Analisis N-Gain menunjukkan peningkatan pada domain kompetensi yaitu kompetensi menjelaskan fenomena ilmiah, kompetensi mengevaluasi dan merancang penelitian ilmiah, serta kompetensi menginterpretasikan data dan bukti ilmiah. Begitu juga dengan domain pengetahuan yaitu pengetahuan konten, pengetahuan prosedural, dan pengetahuan epistemik. Pembelajaran dengan *scientific approach* telah dapat meningkatkan domain kompetensi dan domain pengetahuan dalam kategori sedang.

Kata Kunci : *scientific approach*, literasi saintifik, kalor.

THE IMPLEMENTATION OF SCIENTIFIC APPROACH IN EFFORTS TO TRAINING SCIENTIFIC LITERACY IN THE COMPETENCE DOMAIN AND THE KNOWLEDGE DOMAIN OF JUNIOR HIGH SCHOOL STUDENTS' ON THE TOPIC OF HEAT

College student : Widi Ilhami Novili, 1200068

Supervisor I : Dr. Setiya Utari, M.Si

Supervisor II : Duden Saepuzaman, M.Pd

*Department of Physics Education, Faculty of Mathematics and Sciences
Education,
Indonesia University of Education, Academic Year 2016*

Abstract

Scientific Literacy (SL) is a person's ability to use knowledge and scientific process to understand scientific phenomena in solving a problem or making a decision. However it is known that the SL of Indonesian students are in low grade. There is an indication that the SL is less facilitated in science learning. Capabilities that it is seen difficult associated with evaluating and designing scientific investigations, as well as making the questions for investigation. Quasy-experimental research with one group pretest and posttest design applied in one of the schools in Bandung city through random sampling, which consist of 32 students which aim to get the result of the SL ability after being applied scientific approach to the chapter heat. The instrument uses 20 essays with a reliability of 0.83. N-Gain analysis showed an increase in the domain of competence, that is a competence in explaining scientific phenomena, competence in evaluating and designing of scientific research, as well as the competence to interpret the data and scientific evidence. Likewise with the knowledge domain, consist of content knowledge, procedural knowledge, and epistemic knowledge. Learning with applying scientific approach has been able to increase the competency and knowledge domain in the medium category.

Keyword(s): *scientific approach, scientific literacy, heat.*